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Online retailers' management system of marketing commodity policy

Abstract. *Introduction.* In the conditions of continuous change and bifurcations of the marketing environment, the system of management of marketing commodity policy (SMMCP) of online retailers is impacted by a set of immanent components, the inclusion of which makes it possible to multiply the efficiency of their functioning in the cyber space and timely adjust the plan to implement marketing activities. In this regard, the urgency in substantiating, systematising the immanent components (quantitative measurement) and developing practical principals relevant to the assessment of the impact of such components on the SMMCP of online retailers based on the use of a multidimensional simulation method is becoming more relevant.
The purpose of this article is to develop canonical models for assessing the impact of partial immanent components (quantitative measurement) on the SMMCP of online retailers, taking into account the corresponding latent root causes. In order to automate calculations and construct canonical models, the authors of the article use the demo version of the «STATISTICA» software package.
Results. The author of the article has substantiated and systematised the immanent components and their impact on the SMMCP of online retailers (quantitative measurement), as well as the root causes of the formation of the SMMCP of online retailers that determine the partial immanent components of impact, and explained the correlation between the corresponding attributes, giving their meaningful interpretation. Consequently, canonical models for assessing of partial immanent components of impact on the SMMCP of online retailers, the implementation of which is the basis for making effective marketing decisions and achievement of corresponding goals by applying managerial impact locally.
Conclusion. The approbation of the developed canonical models has allowed the author to single out three groups of online retailers and formulate practical recommendations with regard to further implementation of marketing activities.
Keywords: online retailers; management system of marketing commodity policy (MSMCP); immanent components of influence; latent root causes; canonical models.
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Система управління маркетинговою товарною політикою онлайн-ритейлерів
Анотація. Обґрунтовано та систематизовано іманентні компоненти впливу (кількісного вимірювання) на СУМТП онлайн-ритейлерів. Ідентифіковано латентні першопричини формування СУМТП онлайн-ритейлерів, що детермінують частинні іманентні компоненти впливу, а також пояснюють кореляцію між відповідними ознаками та змістовно їх інтерпретують. Розроблено канонічні моделі оцінки частинних іманентних компонентів впливу на СУМТП онлайн-ритейлерів, реалізація яких є фундаментом для генерування дієвих маркетингових рішень та досягнення відповідних цілей за рахунок точкового управлінського впливу.
Ключові слова: онлайн-ритейлери; система управління маркетинговою товарною політикою (СУМТП); іманентні компоненти впливу; латентні першопричини; канонічні моделі.

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Аннотация. Обоснованно и систематизировано имманентные компоненты воздействия (количественного измерения) на СУМТП онлайн-ритейлеров. Идентифицировано латентные первопричины формирования СУМТП онлайн-ритейлеров, детерминирующих частичные имманентные компоненты воздействия, а также объясняющие корреляцию между соответствующими признаками и содержательно их интерпретирующими. Разработано канонические модели оценки частичных имманентных компонентов воздействия на СУМТП онлайн-ритейлеров, реализация которых является фундаментом для генерирования действенных маркетинговых решений и достижения соответствующих целей за счет точечного управленческого воздействия.
Ключевые слова: онлайн-ритейлеры; система управления маркетинговой товарной политикой (СУМТП); имманентные компоненты влияния; латентные первопричины; канонические модели.

1. Introduction

In the conditions of continuous change and bifurcations of the marketing environment, the system of management of marketing commodity policy (SMMCP) of online retailers is impacted by a set of immanent components, the inclusion of which makes it possible to multiply the efficiency of their functioning in the cyber space and timely adjust the plan to implement marketing activities. In this regard, the urgency in substantiating, systematising the immanent components (quantitative measurement) and developing practical principals relevant to the assessment of the impact of such components on the SMMCP of online retailers based on the use of a multidimensional simulation method is becoming more relevant.

2. Brief Literature Review

Various aspects of the development of online business in the context of constant change in the environment, as well as

the peculiarities of the development of digital business models that make it possible to adapt to such change, have been investigated by G. Remane, A. Hanelt, R. Nickerson, L. Kolbe, F. Svahn, L. Mathiassen, R. Lindgren and G. Kane (2017). It is important to note that D. Paulus-Rohmer, H. Schatton and T. Bauernhansl (2016), as well as N. Foss and T. Saebi, dedicate their scientific work to the study of the role of innovation in the development of business models that improve management efficiency in the changing online environment. Leading economists representing well-known companies in the world market and academicians, such as M. Rachinger, R. Rauter, C. Müller, W. Vorraber and E. Schirgi (2018); H. Gimpel and M. Röglinger (2015), study various problems of online business in the conditions of digitalisation, finding it necessary to take into account the impact of marketing environment factors. Not downplaying the importance of scientific achievements in this area, it should be noted that the assessment of the impact of immanent components on the SMMCP of online retailers remains insufficiently studied, therefore relevant.

3. Therefore, **the purpose** of the article is to develop canonical models for the impact of partial immanent components (quantitative measurement) on the SMMCP of online retailers, taking into account the relevant latent root causes.

4. Results

According to the results of the studies of the specifics of online retailers' functioning at both the national and international levels, the author proposes to consider traffic statistics and the state of filling the product portfolio to be partial immanent components of the impact (quantitative measurement) on the SMMCP of online retailers.

Traffic statistics *(TS)* of online retailers, which is the first partial immanent component of the impact (quantitative measurement) on the SMMCP of online retailers, is determined by five latent root causes identified basing on data from the information company «Alexa», which is the world leader in the Web analytics industry.

1. Ranking of the website in Ukraine (TS 1)

This is a latent root cause that shows how popular one retailer's website is if compared to others. It is worth pointing out that, when ranking websites, it is important to consider visitors who possess the built-in «Alexa Toolbar» browser which transmits data to the general service. When ranking websites, it is common to take into account the quality of their traffic and the level of their popularity. Therefore, the more potential buyers visit the online retailer's website and leave their comments, the higher the website ranks, holding the first or close position in the ranking. The foregoing indicates that $TS1$ is a destimulating factor, if compared with TS, since an increase in $TS1$ negatively affects TS.

2. Refusal rate (TS 2)

This is a latent root cause that reflects the percentage of visitors (potential online buyers) that left the website from the sign-in page or viewed no more than one page on the website. In general terms, a refusal is a visit during which the user views only one webpage without proceeding to another webpage before the end of online session. It should be noted that there is no generally accepted standard that considers either minimum or maximum amount of time that the user must spend online before closing the webpage and leaving the website. The duration of one online session is determined by the length of time between the first and the last time the user visits the webpage. According to R. Nichols (2018), the main reasons for refusals are linking to another website, closing the window or tab of the web browser, entering a new URL, returning to search (clicking the «Back» button on the web browser, the session timeout.

3. Visitor's browsing the web on a daily basis (TS 3)

This is a latent root cause which shows the ratio between the number of visitors (potential online buyers) to the website and the total number of views, and reflects the maximum number of revisits to the website, including the frequency of visits by those who previously visited the website. The online retailer's commercial portfolio created in accordance with the preferences of online buyers and taking into account their varied queries increases the number of revisits to the website.

4. Time spent by the visitor on the website daily (TS 4)

This is a latent root cause that displays daily page views per visitor in seconds. The long-term presence of online buyers on the online retailer's website can be interpreted as tracking the emergence of new products, which determines the maximum satisfaction of online buyer's needs and preferences.

5. Location of website visitors by country (TS 5)

This latent root cause makes it possible to see from what countries website visitors come from and determine in which of the countries the website is popular. Data are updated on a monthly basis.

The three latent root causes that determine the size of the commercial portfolio (CP) of the online retailer as the second partial immanent components of impact (quantitative measurement) on the SMMCP of online retailers are given below.

1. Width of stock keeping units (CP 1)

This is the optimal number of product line items on the online retailer's website, which is also a factor determining the attractiveness of the website with regard to its visitors and strengthening the online retailer's market position, if compared to their competitors.

2. Product depth (CP 2)

The online retailer's product depth is reflected in the structure of the online directory and its nesting depth. A well-designed directory structure of a website, which is usually designed in a hierarchical manner, is required to maintain convenient and efficient work of online retailers. In the process of the directory structure development, online retailers define the required nesting depth.

3. Number of product items (CP 3)

This is a latent root cause which reflects the number of products offered by an online retailer.

According to the research conducted by Prom.ua (2017), an item with a generalised name is ignored by users in 70% of cases, and goods without description and photographs are not noticed by 80% of users. Therefore, it is appropriate for online retailers to pay close attention to the description and characteristics of product items that are observed on websites.

In order to construct models for assessing the impact of partial immanent components (quantitative measurement) on the SMMCP of online retailers, we have identified the values of the latent root causes (Table 1). When studying the latent root cause TS 5 (Location of website visitors by country), the maximum number of countries relevant to online retailers was determined to be 5. Also, we can determine three intervals to evaluate CP 3 (Number of product items): if the number of product items (x) is greater than or equals 350 ($x \geq 350$), then $CP = 1$; if $350 < x \leq 700$, then $CP = 2$; if $x > 700$, then $CP = 3$.

At this stage of studying the relationships between the latent root causes which determine the traffic statistics (TS) and the size of the commercial portfolio (CP) in the demo version of the «STATISTICA» software package (2018), the value is provided for each of the 21 online retailers under study, including their canonical analysis.

The overall results of the canonical analysis are reflected in Table 2. The canonical correlation R is 0.739. The obtained value indicates the presence of a strong relationship between the groups of variables. The value of χ^2 is 20.618 at a significance level of less than 0.005, which proves the significance of the canonical correlation.

As can be seen from Table 2, the left set consists of 5 variables, while the right set comprises 3 variables. The variance of the left set is 81.035%, while the variance of the right set is 100%. 18.979% of the left set of variables is explained by the right set of variables, and 43.121% of the right set of variables is explained by the left set of variables. Below each of the sets in Table 2, there are relevant variables that form them. The percentage of the variances shows the proportion of each of the variances (its variability), which is explained by each set of variables. The overall redundancy of the sets of variables is a value that shows to what extent the real variability of one of the set of variables is explained by the other set of variables.

It should be noted that the number of canonical roots is equal to the number of variables in a smaller set. Consequently, the total number of canonical roots is 3. To check the significance of the canonical roots, we determined the χ^2 statistics.

Tab. 1: **Latent root causes of partial immanent components (quantitative measurement) on the SMMCP of online retailers (as of 01 November 2018)**

No.	Online retailer	Code designation	Traffic statistics *(TS)*					Size of the commercial portfolio *(CP)*		
			Ranking of the website in Ukraine, position	Refusal rate, %	Visitor's browsing the web on a daily basis	Time spent by the visitor on the website daily, seconds	Location of website visitors by country, number	Width of stock keeping units, number	Product depth, units	Number of product items
			TS1	*TS2*	*TS3*	*TS4*	*TS5*	*CP1*	*CP2*	*CP3*
1	Auchan Ukraine LLC	*FR1*	4,745	35.5	4.00	181	4	23	206	3
2	Metro Cash and Carry Ukraine LLC	*FR2*	1,208	53.8	2.75	213	5	20	175	3
3	NOVUS Ukraine LLC	*FR4*	1,196	53.8	2.75	213	5	14	127	3
4	DC Ukraine LLC	*DR1*	1,001	37.6	4.46	336	5	9	89	2
5	RUSH LLC	*DR2*	1,731	33.6	4.20	297	5	10	53	1
6	ALLO LLC	*HA1*	83	60.9	2.94	243	5	15	178	3
7	Group of companies Foxtrot LLC	*HA2*	129	42.0	3.83	326	5	12	57	3
8	DIESA LLC	*HA3*	349	70.7	1.79	186	5	8	66	3
9	Comfy Trade LLC	*HA4*	103	47.0	3.25	297	5	8	54	3
10	NRP LLC	*HA5*	280	64.5	1.90	166	5	17	192	2
11	Citrus Discount LLC	*HA6*	95	70.5	2.02	184	5	21	137	3
12	Leroy Merlin Ukraine LLC	*DIY5*	3727	30.2	5.40	347	4	18	143	3
13	NASH KRAI-LC LLC	*FR3*	16,364	68.3	3.00	154	1	19	178	1
14	Tavria B LLC	*FR5*	4,712	31.6	12.00	346	5	17	114	2
15	Fozzy Food LLC	*FR6*	3,407	52.3	4.00	240	5	23	125	3
16	Budmax LLC	*DIY3*	32,145	48.8	2.70	205	1	6	36	1
17	BRV Kyiv Private JSC	*DIY1*	19,728	37.5	7.30	339	1	5	32	2
18	Nova Linia Private JSC	*DIY2*	838	42.4	3.65	298	5	13	102	3
19	Epicentr K LLC	*DIY4*	146	41.2	5.16	387	5	9	107	3
20	Furniture Company of Ukraine LLC	*DIY6*	6,335	43.0	4.80	303	3	10	77	2
21	JYSK UKRAINE LLC	*DIY7*	1,669	28.3	7.00	385	5	9	99	2

Source: Compiled by the author

Tab. 2: **Results of the canonical analysis**

No.		Left set of variables	Right set of variables
1	Number of variables	5	3
2	Variance	81.035%	100.000%
3	Overall redundancy	18.979%	43.121%
4	Variables 1	*TS1*	*CP1*
5	2	*TS2*	*CP2*
6	3	*TS3*	*CP3*
7	4	*TS4*	
8	5	*TS5*	

Source: Compiled by the author

The results of the χ^2 test indicate only two canonical roots should be considered statistically significant and be used for further interpretation.

The load of canonical factors can also be interpreted as in the case of the factor analysis. They represent a correlation between the sets of variables and corresponding canonical variables. Taking into account that our research touches upon two canonical roots, the first canonical root is determined by the variable $TS4$ (time spent by the visitor on the website daily). The first root for the right set is determined by the variable $CP1$ (width of stock keeping units), and the second root is determined by the variable $CP3$ (number of product items) In the left set, the second root accounts for 24.8% of the variance, while the first root accounts for only 14.1%. In the right set, the second root accounts for 48.5% of the variance, while the first root accounts for 43.2%.

Also, according to the results of the canonical analysis, we determined canonical scales for each set of variables. The scales meet the standardised variables. They can be used to interpret canonical roots. The greater the absolute value of the scale is, the more the corresponding value impacts the value of the canonical variable. The value $CP1$ (width of stock keeping units) contributes most to the value of the first canonical variable in the right set, while $CP3$ (number of product items) contributes most to the value of the second canonical variable. In terms of the left set, the variable $TS4$ (time spent by the visitor on the website daily) has the greatest impact on the value of the first canonical variable, while $TS5$ (location of website visitors by country) determines the value of the second canonical variable.

The canonical scales can be interpreted as load factors. Therefore, it can be argued that the first canonical root has $CP1$ (width of stock keeping units) at the negative pole, while $TS4$ (time spent by the visitor on the website daily) is observed at the positive pole. The second canonical root has $CP3$ (number of product items) at the positive pole and $TS5$ (location of website visitors by country).

To construct the mathematical expression of canonical models for assessing the impact of partial immanent components (quantitative measurement) on the SMMCP of online retailers, we used the canonical scales for the left and the right sets of variables. The obtained canonical models for estimating traffic statistics Z_{TS} (1) and the size of the commercial portfolio Z_{CP} (2) are given below:

$$Z_{TS} = 0.244\,TS1 + 0.408\,TS2 - 0.696\,TS3 + \\ + 1.548\,TS4 + 0.940\,TS5; \quad (1)$$

$$Z_{CP} = -0.976\,CP1 + 0.251\,CP2 + 0.888\,CP3. \quad (2)$$

In order to assess the impact of partial immanent components (quantitative measurement) on the SMMCP of the online retailers under research, we used the standardised values of the corresponding root causes as the variables $TS1$-$TS5$ and $CP1$-$CP3$. The results are given in Table 3.

Based on the results of the calculations, we identified three groups of online retailers with regard to the assessment of the impact of partial immanent components. To do this we determined three equal intervals taking into account the minimum and the maximum values (Table 4).

The overall results of the distribution of the online retailers in three groups depending on the assessment of the impact of partial immanent components (quantitative measurement) on the SMMCP of the online retailers are given in Table 5.

5. Conclusions

The results of the calculations show that the online retailers, which represent Group 1 and have the impact of partial immanent components on the SMMCP assessed as low, do not fully take into account the effect of the latent root causes. This necessitates the development and implementation of a series of

Tab. 3: **Results of the assessment of the impact of partial immanent components (quantitative measurement) on the SMMCP of the online retailers**

No.	Online retailer	Assessment of the impact of partial immanent components	
		Traffic statistics (Z_{TS})	Size of the commercial portfolio (Z_{TS})
1	*FR1*	-2.251	-0.501
2	*FR2*	-0.120	-0.127
3	*FR4*	-0.120	0.686
4	*DR1*	1.404	0.184
5	*DR2*	0.579	-1.350
6	*HA1*	0.622	0.755
7	*HA2*	1.494	0.702
8	*HA3*	0.099	1.438
9	*HA4*	1.221	1.381
10	*HA5*	-0.535	-0.716
11	*HA6*	-0.026	-0.481
12	*DIY5*	0.556	0.068
13	*FR3*	-3.119	-2.320
14	*FR5*	-0.721	-1.086
15	*FR6*	0.081	-0.885
16	*DIY3*	-2.098	-0.737
17	*DIY1*	-1.432	0.608
18	*DIY2*	1.004	0.741
19	*DIY4*	2.327	1.459
20	*DIY6*	-0.355	-0.047
21	*DIY7*	1.389	0.231

Source: Compiled by the author

Tab. 4: **Assessment of the impact of partial immanent components (quantitative measurement) on the SMMCP of the online retailers**

No.	Assessment of impact	Code designation	Intervals of the assessment of the impact of partial immanent components	
			Traffic statistics (Z_{TS})	Size of the commercial portfolio (Z_{TS})
1	Low	L	$-3.119 \le Z_{TS} \le -1.304$	$-2.320 \le Z_{TP} \le -1.060$
2	Medium	M	$-1.304 < Z_{TS} \le 0.512$	$-1.060 < Z_{TP} \le 0.199$
3	High	H	$0.512 < Z_{TS} \le 2.327$	$0.199 < Z_{TP} \le 1.459$

Source: Compiled by the author

Tab. 5: **Results of the assessment of the impact of partial immanent components (quantitative measurement) on the SMMCP of the online retailers**

Group	Assessment of impact	Partial immanent components of impact	
		Traffic statistics (Z_{TP})	Size of the commercial portfolio (Z_{TP})
1	L	Auchan Ukraine LLC, NASH KRAI-LC LLC, Budmax LLC, BRV Kyiv Private JSC.	RUSH LLC, NASH KRAI-LC LLC, Tavria B LLC.
2	M	NOVUS Ukraine LLC, Metro Cash and Carry Ukraine LLC, Citrus Discount LLC, DIESA LLC, NRP LLC, Tavria B LLC, Fozzy Food LLC, Furniture Company of Ukraine LLC.	NRP LLC, Auchan Ukraine LLC, Citrus Discount LLC, Metro Cash and Carry Ukraine LLC, Leroy Merlin Ukraine LLC, DC Ukraine LLC, Fozzy Food LLC, Budmax LLC, Furniture Company of Ukraine LLC.
3	H	Leroy Merlin Ukraine LLC, RUSH LLC, ALLO LLC, Comfy Trade LLC, DC Ukraine LLC, Group of companies Foxtrot LLC, Nova Linia Private JSC, JYSK UKRAINE LLC, Epicentr K LLC.	NOVUS Ukraine LLC, Group of companies Foxtrot LLC, ALLO LLC, Comfy Trade LLC, DIESA LLC, JYSK UKRAINE LLC, BRV Kyiv Private JSC, Nova Linia Private JSC, Epicentr K LLC.

Source: Compiled by the author

activities aimed at increasing the online retailers' Internet activity and ensuring timely updating of the commercial portfolio according to variation requests and preferences of online buyers, which, in the long run, will indicate a high or medium level of impact of the partial immanent components of quantitative measurement on the SMMCP of the online retailers.

The online retailers forming Group 2 and Group 3 have a medium level and a high level of the impact of partial immanent components on the SMMCP, respectively. This means that Group 2 online retailers should focus on changing or expanding the online marketing tools that they traditionally use to most fully consider the latent root causes, in particular the size of their commercial portfolio. Meanwhile, Croup 3 online-retailers should continue to implement marketing activities that provide the necessary positive the impact of partial immanent components on the SMMCP.

References

1. Remane, G., Hanelt, A., Nickerson, R. C., & Kolbe, L. M. (2017). Discovering Digital Business Models in Traditional Industries. *Journal of Business Strategy, 38*(2), 41-51. doi: https://doi.org/10.1108/JBS-10-2016-0127
2. Svahn, F., Mathiassen, L., Lindgren, R., & Kane, G. (2017). Mastering the digital innovation challenge, *MIT Sloan Management Review, 58*(3), 14-16. Retrieved from https://www.researchgate.net/publication/317371368_Mastering_the_Digital_Innovation_Challenge
3. Paulus-Rohmer, D., Schatton, H., & Bauernhansl, T. (2016). Ecosystems, strategy and business models in the age of digitization - how the manufacturing industry is going to change its logic. *Procedia CRIP, 57,* 8-13. doi: https://doi.org/10.1016/j.procir.2016.11.003
4. Foss, N. J., & Saebi, T. (2018). Business models and business model innovation: between wicked and paradigmatic problems. *Long Range Planning, 51*(1), 9-21. doi: https://doi.org/10.1016/j.lrp.2017.07.006
5. Rachinger, M., Rauter, R., Müller, Ch., Vorraber, W., & Schirgi, E. (2018). Digitalization and its influence on business model innovation. *Journal of Manufacturing Technology Management, 20*(2), 105-124. doi: https://doi.org/10.1108/JMTM-01-2018-0020
6. The World Bank (2016). *World Development Report 2016: Digital Dividends.* Washington: International Bank for Reconstruction and Development, The World Bank. Retrieved from http://www.worldbank.org/en/publication/wdr2016
7. Digital McKinsey (2017). *Digital Reinvention.* McKinsey & Company. Retrieved from https://www.mckinsey.com/~/media/mckinsey/business%20functions/mckinsey%20digital/our%20insights/digital%20reinvention/digital%20reinvention.ashx
8. Gimpel, H., & Röglinger, M. (2015). *Digital Transformation. Changes and Chances - Insights based on an Empirical Study.* Project Group Business and Information Systems Engineering (BISE). Augsburg, Bayreuth: Fraunhofer Institute for Applied Information Technology FIT. Retrieved from https://www.fim-rc.de/wp-content/uploads/Fraunhofer-Studie_Digitale-Transformation.pdf
9. Teece, D. J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning, 43*(2-3), 172-194. doi: https://doi.org/10.1016/j.lrp.2009.07.003
10. Capgemini Consulting (2018). *Official web-site.* Retrieved from https://www.capgemini.com/consulting
11. Okumus, F. (2003). A framework to implement strategies in organizations. *Management Decision, 41*(9), 871-882. doi: https://doi.org/10.1108/00251740310499555
12. International Business Machines Corporation (2011). *Digital transformation. Creating new business models where digital meets physical.* IBM Global Business Services, Executive Report. New York: IBM Institute for Business Value. Retrieved from https://www-07.ibm.com/sg/manufacturing/pdf/manufacturing/Digital-transformation.pdf
13. The World Economic Forum (2016, January). *Digital Transformation of Industries: In collaboration with Accenture. Digital Enterprise. World Economic Forum White Paper.* Retrieved from http://reports.weforum.org/digital-transformation/wp-content/blogs.dir/94/mp/files/pages/files/digital-enterprise-narrative-final-january-2016.pdf
14. Organisation for Economic Co-operation and Development (2017, January 12). *Key issues for digital transformation in the G20.* Report prepared for a joint G20 German Presidency OECD conference, Berlin. Retrieved from https://www.oecd.org/g20/key-issues-for-digital-transformation-in-the-g20.pdf
15. International Business Machines Corporation (2018). *IBM SPSS software.* Retrieved from https://www.ibm.com/analytics/spss-statistics-software
16. CGI Group (2015). *Digital Customer Experience.* Retrieved from https://www.cgi.com/sites/default/files/files_cz/2_digital_customer_enablement.pdf
17. Makad, S. (2017, February 16). *Digitalization Trends For Better Customer Service In 2017.* Digitalist Magazine. Retrieved from http://www.digitalistmag.com/customer-experience/2017/02/16/digitalization-trends-for-better-customer-service-in-2017-04906118
18. Avande Inc. (2017). *Point of View. Retail reinvented in the age of digital.* Retrieved from https://www.avanade.com/~/media/asset/point-of-view/avanade-retail-point-of-view.pdf
19. Winterhalter, S., Weiblen, T., Wecht, Ch. H., & Gassmann, O. (2017). Business model innovation processes in large corporations: insights from BASF. *Journal of Business Strategy, 38*(2), 62-75. doi: https://doi.org/10.1108/JBS-10-2016-0116
20. Alexa Internet (2018). *Find Website Traffic, Statistics, and Analytics. Keyword Research, Competitive Analysis, & Website Ranking.* Retrieved from https://www.alexa.com/siteinfo
21. Nichols, R. (2018, August 21). *Understanding Bounce Rate to Improve It.* Retrieved from https://www.abtasty.com/blog/bounce-rate
22. Prom.ua (2017). *A trading platform of Ukraine.* Retrieved from https://prom.ua
23. StatSoft - Dell Software Company (2018). *Demo version of the program «STATISTICA».* Retrieved from http://www.statsoft.com/Products/STATISTICA-Features

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